

**Notice of Allowability**

Application No.

10/040,226

Examiner

Christina Y. Leung

Applicant(s)

FEE ET AL

Art Unit

2633

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment and response filed 29 June 2005.
2. ☒ The allowed claim(s) is/are 1,3,5,7-16,18,19,31-34,37,53-59,61-64,67,68,70,72,74-81,84,86,98-101 and 104.
3. ☒ The drawings filed on 03 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

*Christina Y. Leung*  
 Christina Y Leung  
 Patent Examiner  
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## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1, 3, 5, 7-16, 18, 19, 31-34, 37, 53-59, 61-64, 67, 68, 70, 72, 74-81, 84, 86, 98-101 and 104 are allowed.

2. The following is an examiner's statement of reasons for allowance:

The prior art, including Bishop et al. (US 6,507,421 B1), Asahi (US 6,704,508 B1), Shiragaki (US 5,457,556 A), Gerstel et al. (US 5,867,289 A), Fatehi et al. (US 5,892,606 A), Konishi (US 6,101,010 A), and Fee (US 6,108,113 A), does not specifically disclose or fairly suggest an optical switch including all the elements and limitations recited in independent claims 1, 9, 12, 31, 33, 37, 53, 61, 68, 76, 77, 78, 84, 86, 98, 100, and 104.

Bishop et al. generally discloses monitoring the inputs and outputs of an optical switch (Figure 2).

Asahi generally discloses monitoring, at the input ports of an optical switch, a supplemental signal that has been added to a service signal at the output ports of the switch (wherein the supplemental signal travels through the switch in a direction opposite to that of the service signal).

Regarding claims 1, 61, and 68, Konishi generally discloses an optical switch (matrix switch 3 in Figure 2) including at least one optical switching element 31 and a supplemental signal detector (including o/e converter 421, variable band-pass filter 431, and detector 441 in Figure 2). However, Konishi does not specifically disclose that the optical switch issues a fault indication if an attribute of the detected supplement signal does not meet an expected criterion determined based on at least one previously detected value of the attribute.

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Regarding claims 31, 33, 37, 53, 98, 100, and 104, although Gerstel et al. and Asahi generally disclose an optical switch including a supplemental signal injector and detector for determining faults in the system (Gerstel et al., Figure 2; Asahi, Figures 6 and 7), and although Fatehi et al. generally disclose modifying an incoming signal as desired by a user (column 4, lines 16-52), they do not specifically suggest a system with the limitations recited in those claims, particularly including a supplemental signal modifier at the first optical signal port for changing the first supplemental signal into a second supplemental signal and the optical switch infers at least one attribute of the first supplemental signal by detection of the second supplemental signal.

Regarding claims 9, 12, 76, 77, 78, 84, and 86, although Shiragaki and Bishop et al. each teach detecting signals at a first (input) optical signal port of an optical switch and also at a second (output) optical signal port of the switch (Shiragaki, Figure 2; Bishop et al., Figure 2), they do not specifically suggest a system with the limitations recited in those claims, particularly wherein fault indication is issued based upon whether a attribute of a supplemental signal, wherein the supplemental signal includes a modulation applied to the optical signal, detected at the first port agrees with a supplemental signal attribute detected at the second port.

Any comments considered necessary by Applicants must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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*Conclusion*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Y. Leung whose telephone number is 571-272-3023.

The examiner can normally be reached on Monday to Friday, 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christina Y Leung  
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Patent Examiner  
Art Unit 2633